

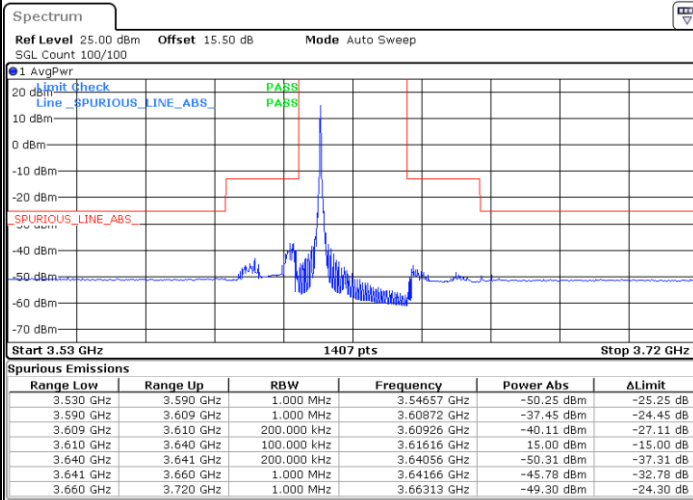


LTE Band 48 / 20MHz

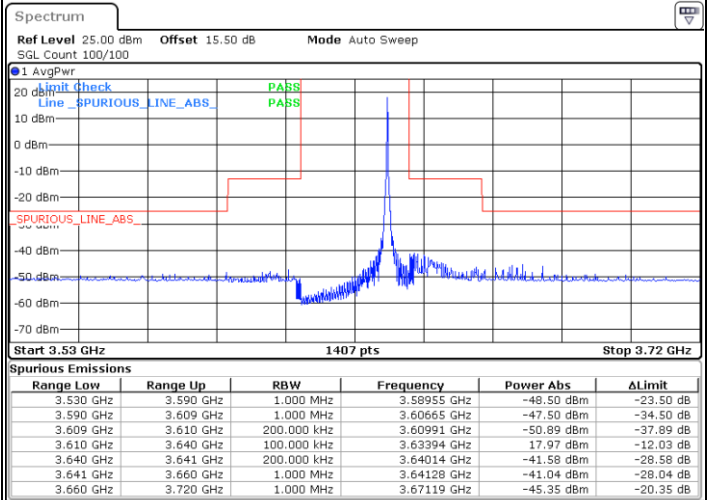
64QAM

Middle Channel / 1RB0

Middle Channel / 1RBmax



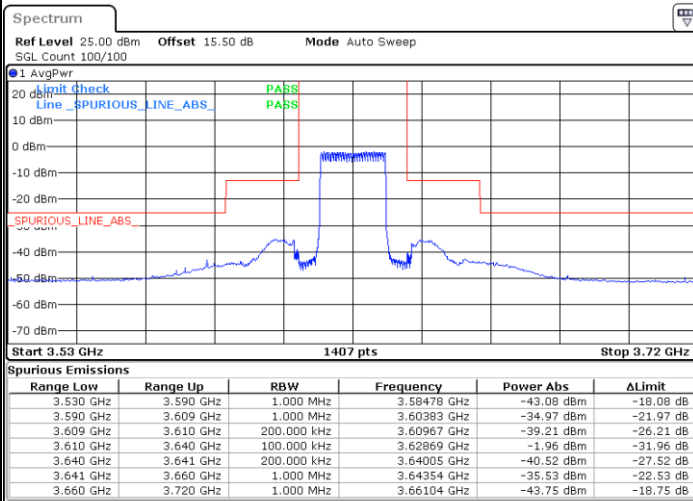
Date: 5.AUG.2022 21:06:27



Date: 5.AUG.2022 21:15:54

Middle Channel / FullRB

N/A



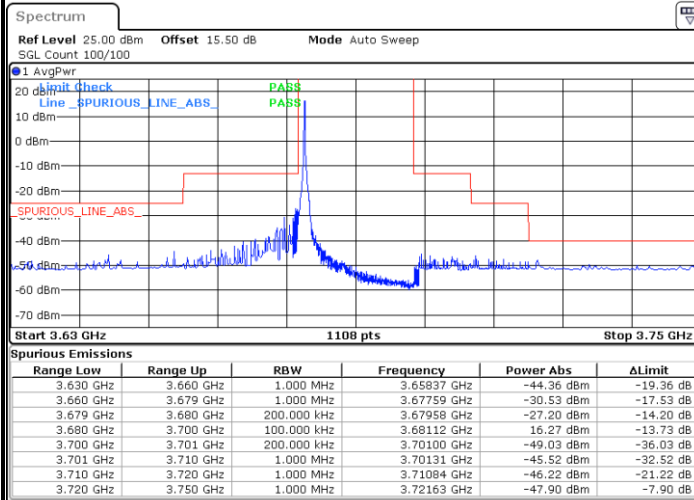
Date: 5.AUG.2022 20:57:01



LTE Band 48 / 20MHz

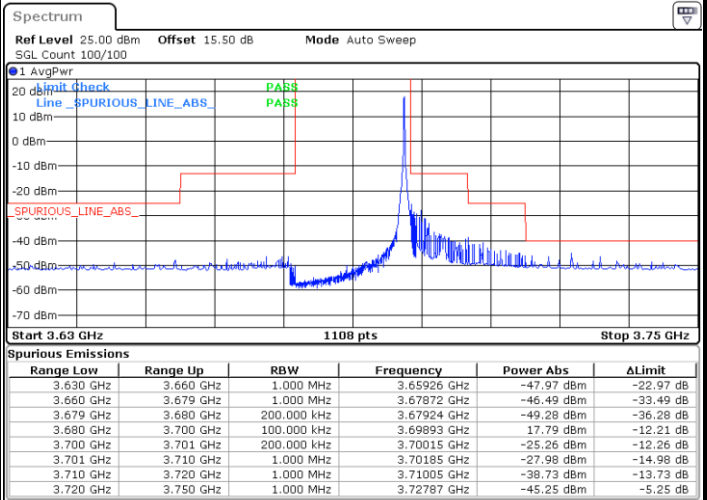
64QAM

Highest Channel / 1RB0



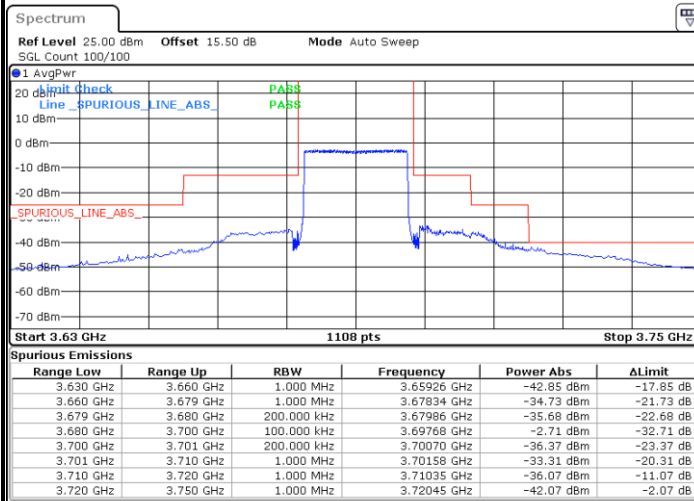
Date: 5.AUG.2022 21:07:30

Highest Channel / 1RBmax



Date: 5.AUG.2022 21:16:56

Highest Channel / FullIRB



Date: 5.AUG.2022 20:58:04

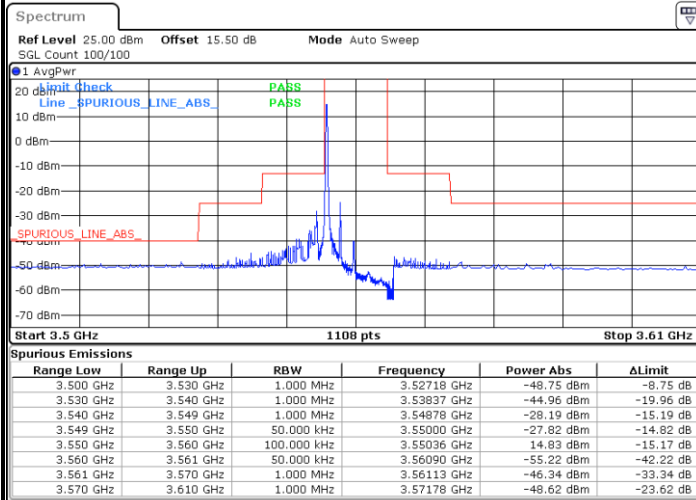
N/A



LTE Band 48 / 5MHz

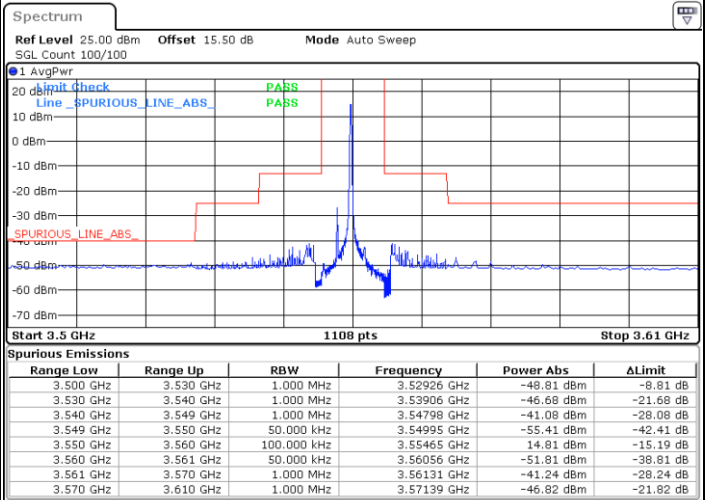
256QAM

Lowest Channel / 1RB0



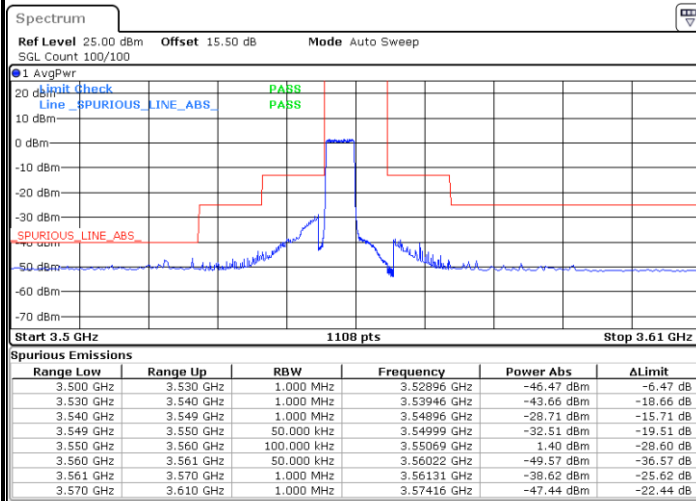
Date: 5.AUG.2022 21:52:09

Lowest Channel / 1RBmax



Date: 5.AUG.2022 21:58:31

Lowest Channel / FullIRB



Date: 5.AUG.2022 21:55:20

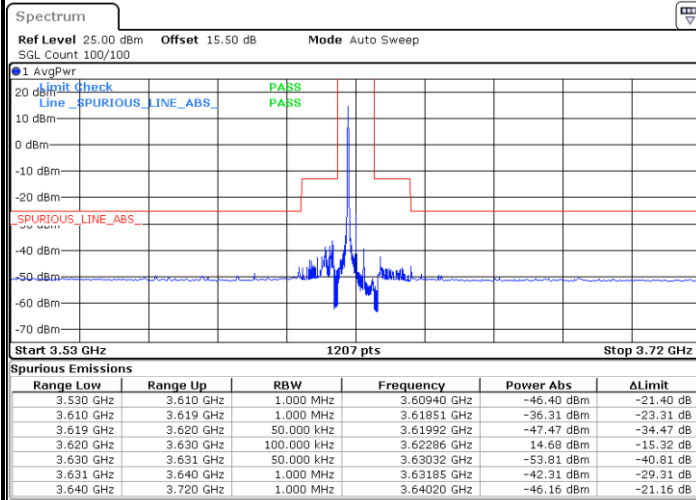
N/A



LTE Band 48 / 5MHz

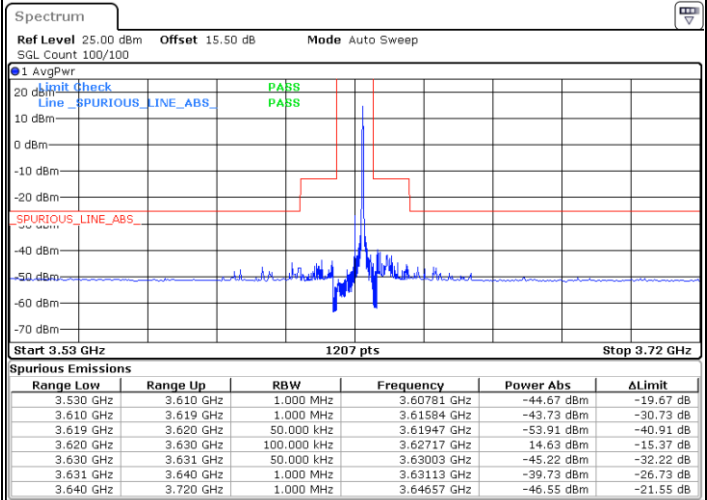
256QAM

Middle Channel / 1RB0



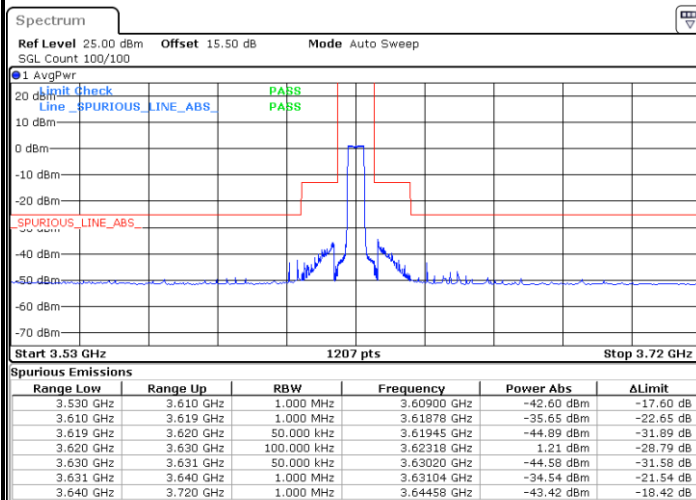
Date: 5.AUG.2022 21:53:12

Middle Channel / 1RBmax



Date: 5.AUG.2022 21:59:34

Middle Channel / FullRB



Date: 5.AUG.2022 21:56:23

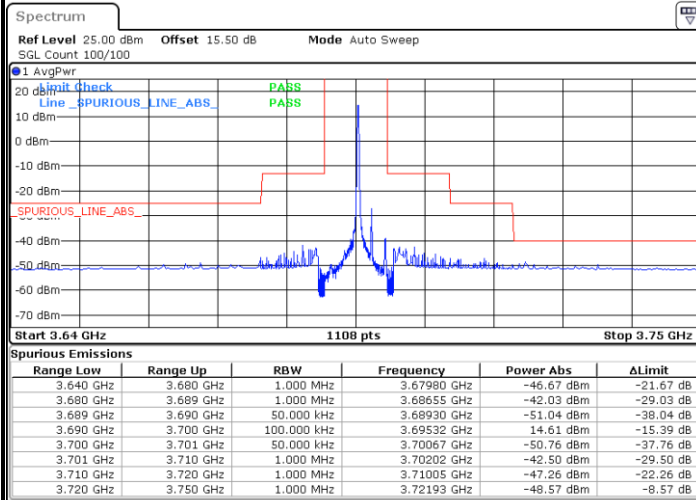
N/A



LTE Band 48 / 5MHz

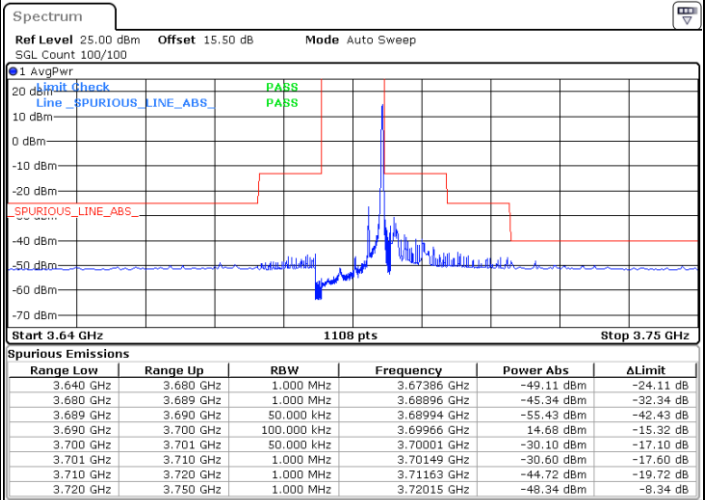
256QAM

Highest Channel / 1RB0



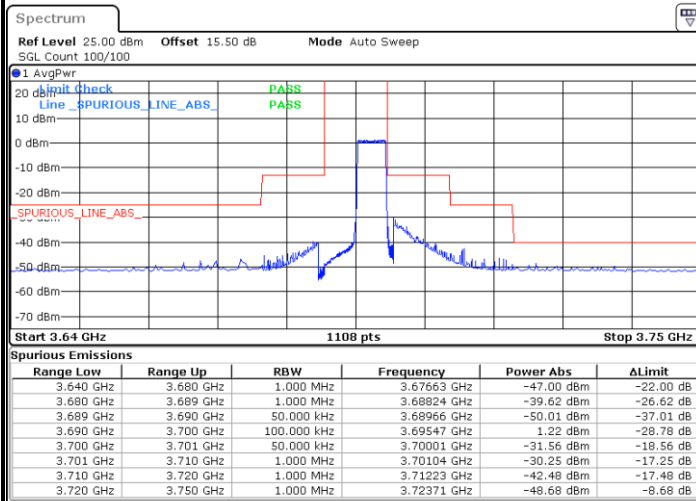
Date: 5.AUG.2022 21:54:15

Highest Channel / 1RBmax



Date: 5.AUG.2022 22:00:37

Highest Channel / FullIRB



Date: 5.AUG.2022 21:57:26

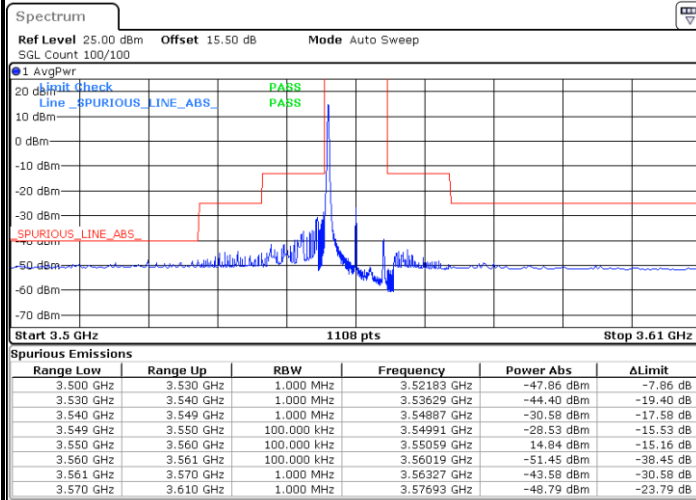
N/A



LTE Band 48 / 10MHz

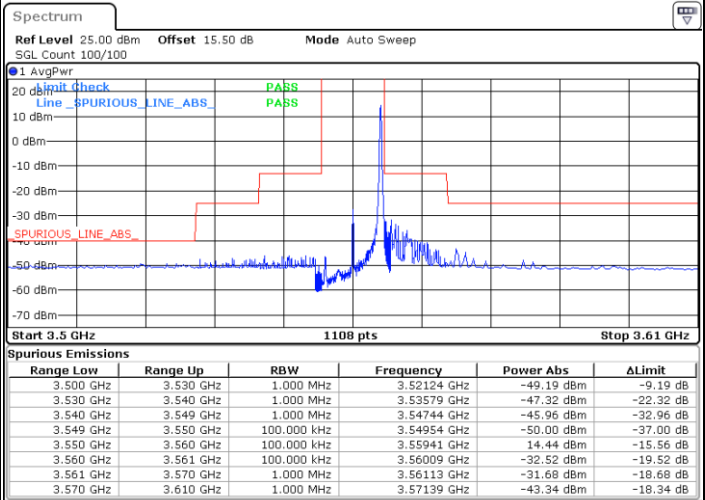
256QAM

Lowest Channel / 1RB0



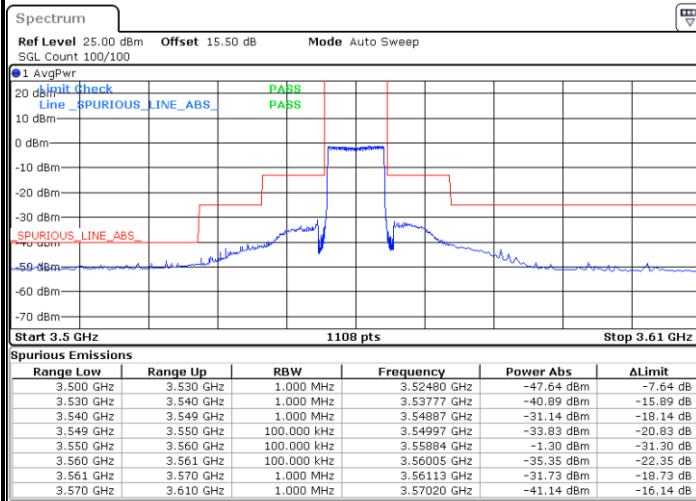
Date: 5.AUG.2022 22:01:45

Lowest Channel / 1RBmax



Date: 5.AUG.2022 22:08:08

Lowest Channel / FullIRB



Date: 5.AUG.2022 22:04:56

N/A

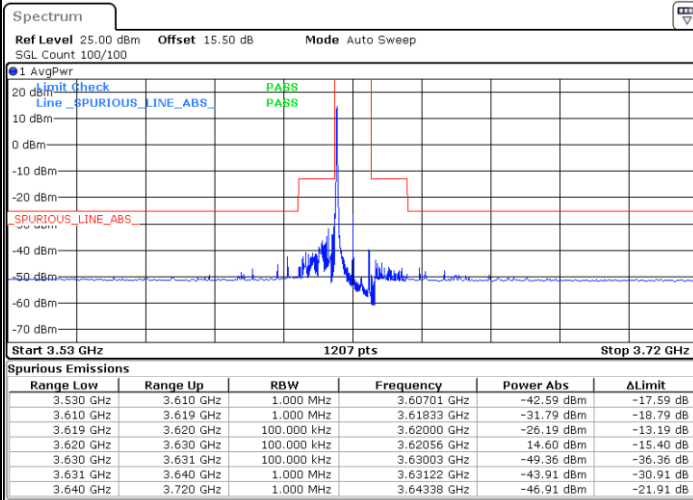


LTE Band 48 / 10MHz

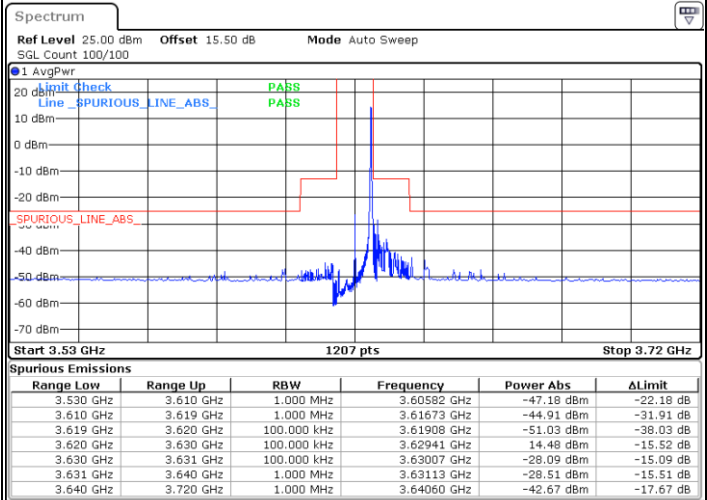
256QAM

MiddleChannel / 1RB0

Middle Channel / 1RBmax



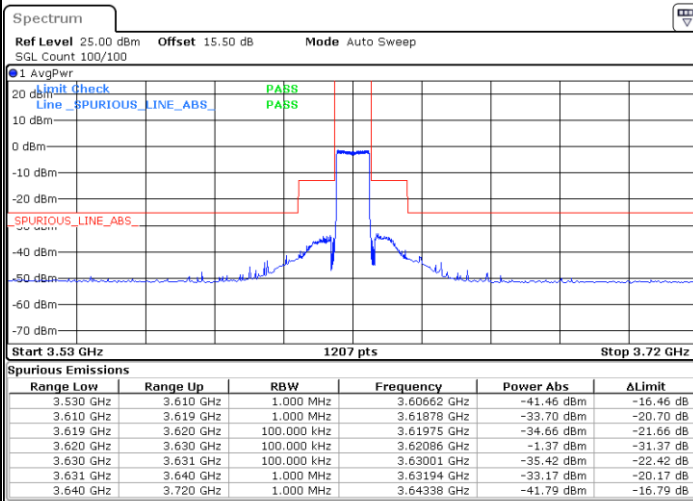
Date: 5.AUG.2022 22:02:48



Date: 5.AUG.2022 22:09:10

Middle Channel / FullRB

N/A



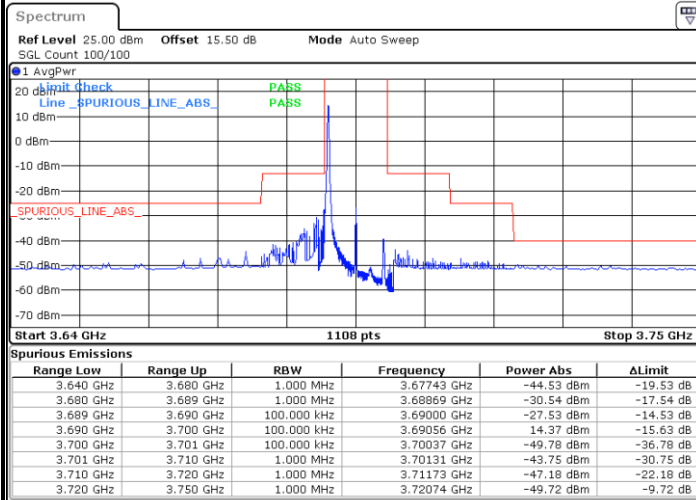
Date: 5.AUG.2022 22:05:59



LTE Band 48 / 10MHz

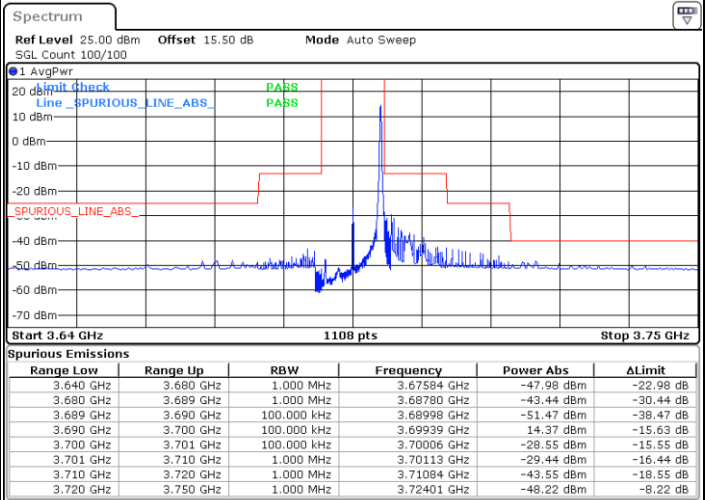
256QAM

Highest Channel / 1RB0



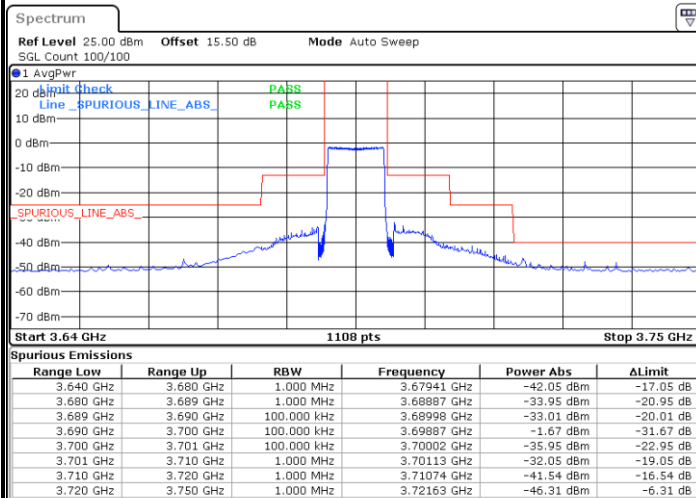
Date: 5.AUG.2022 22:03:50

Highest Channel / 1RBmax



Date: 5.AUG.2022 22:10:13

Highest Channel / FullIRB



Date: 5.AUG.2022 22:07:02

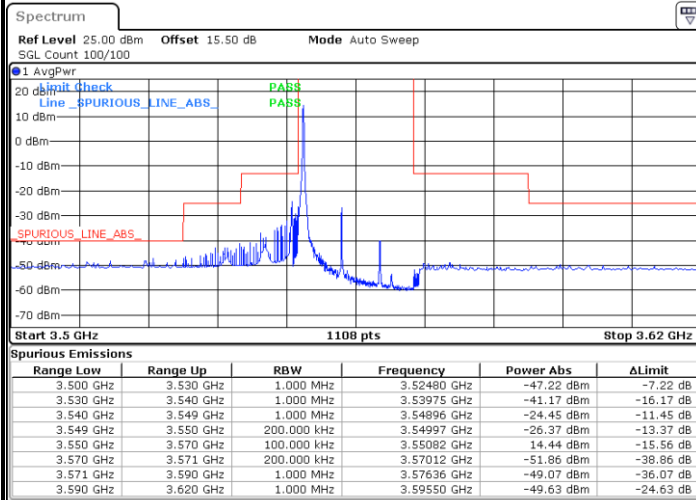
N/A



LTE Band 48 / 15MHz

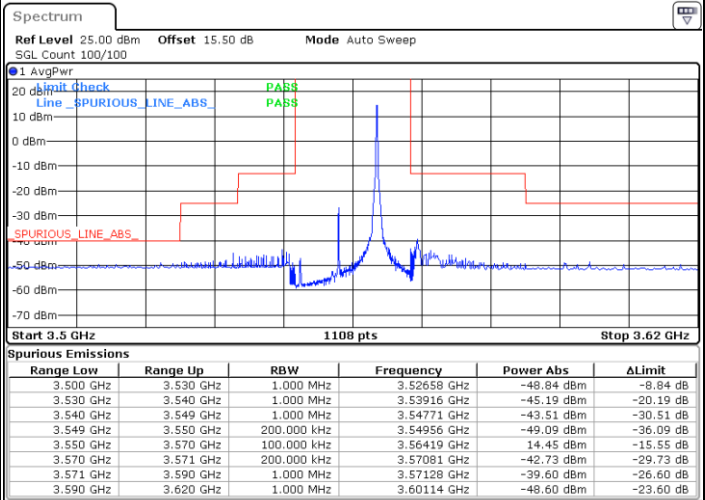
256QAM

Lowest Channel / 1RB0



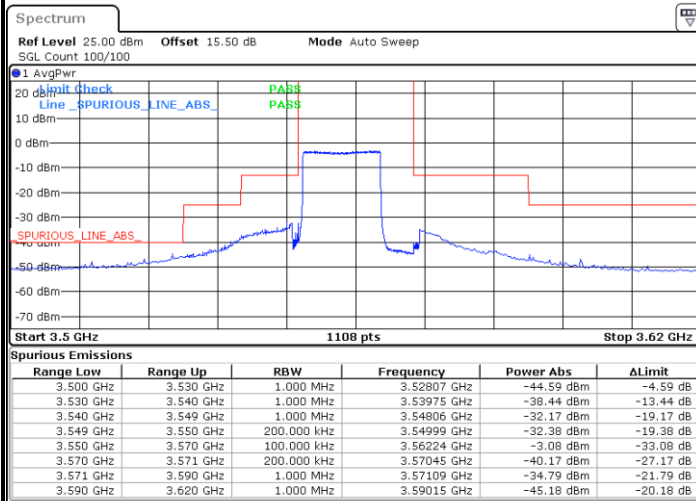
Date: 5.AUG.2022 22:11:21

Lowest Channel / 1RBmax



Date: 5.AUG.2022 22:17:43

Lowest Channel / FullRB



Date: 5.AUG.2022 22:14:32

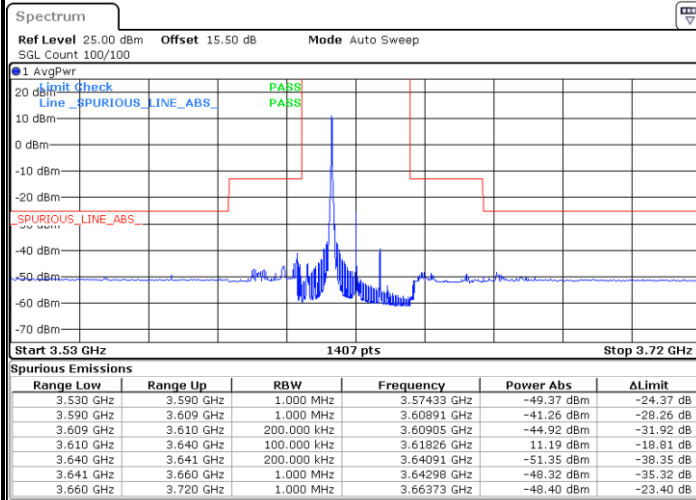
N/A



LTE Band 48 / 15MHz

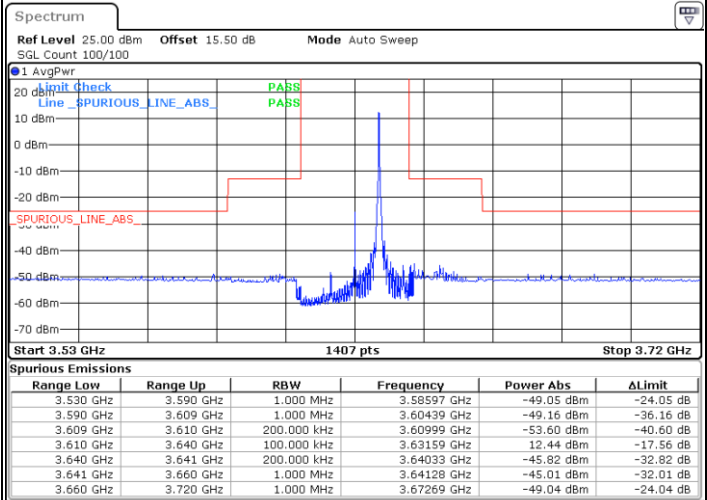
256QAM

Middle Channel / 1RB0



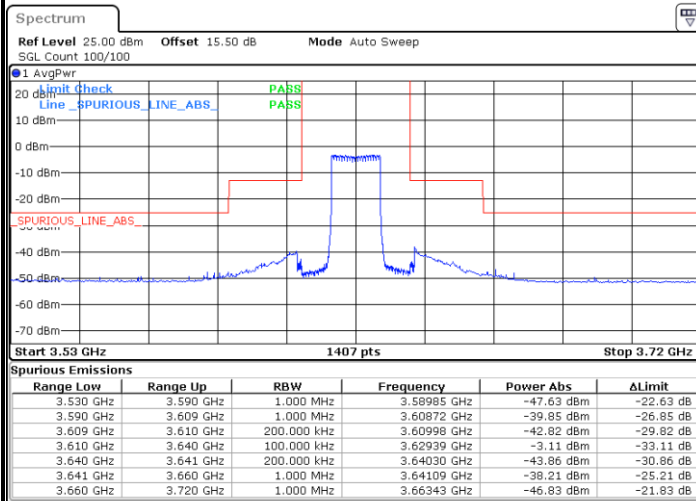
Date: 5.AUG.2022 22:12:23

Middle Channel / 1RBmax



Date: 5.AUG.2022 22:18:46

Middle Channel / FullRB



Date: 5.AUG.2022 22:15:35

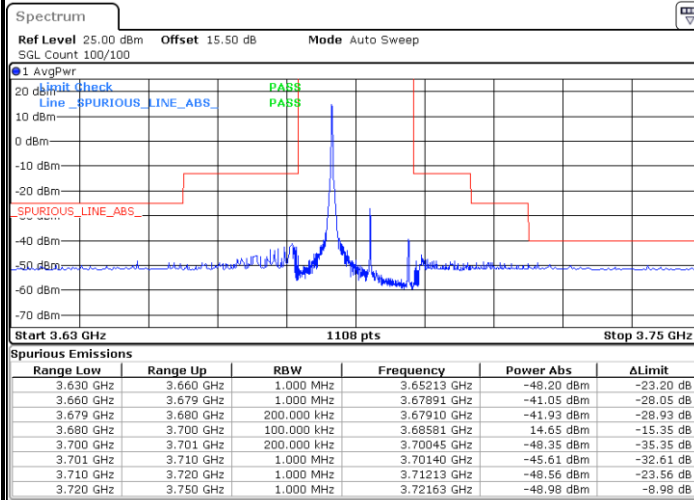
N/A



LTE Band 48 / 15MHz

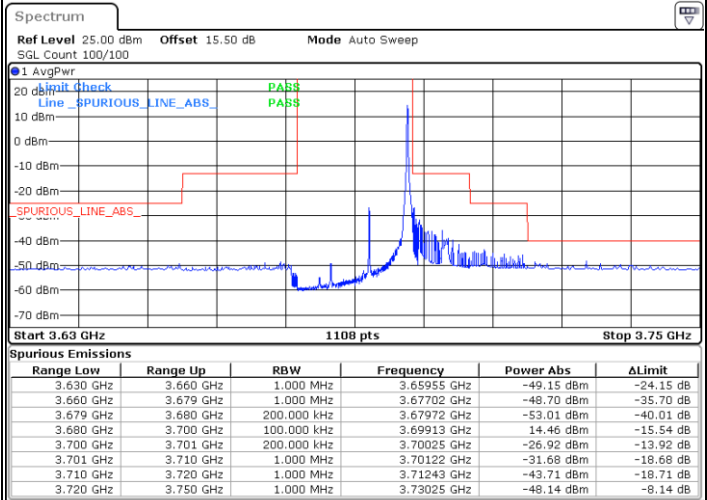
256QAM

Highest Channel / 1RB0



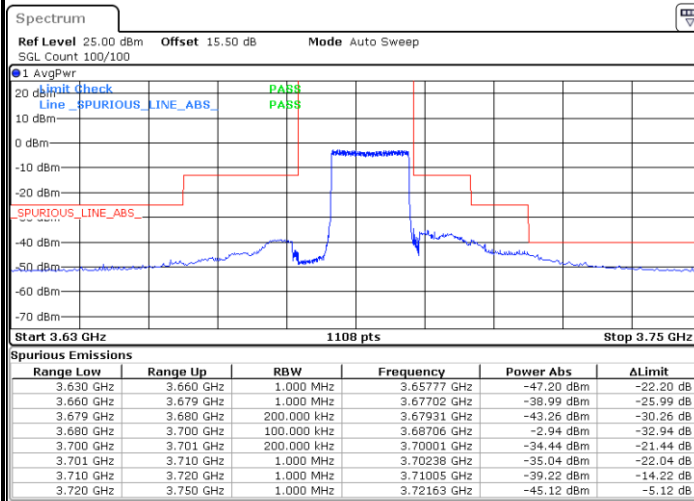
Date: 5.AUG.2022 22:13:26

Highest Channel / 1RBmax



Date: 5.AUG.2022 22:19:49

Highest Channel / FullIRB



Date: 5.AUG.2022 22:16:37

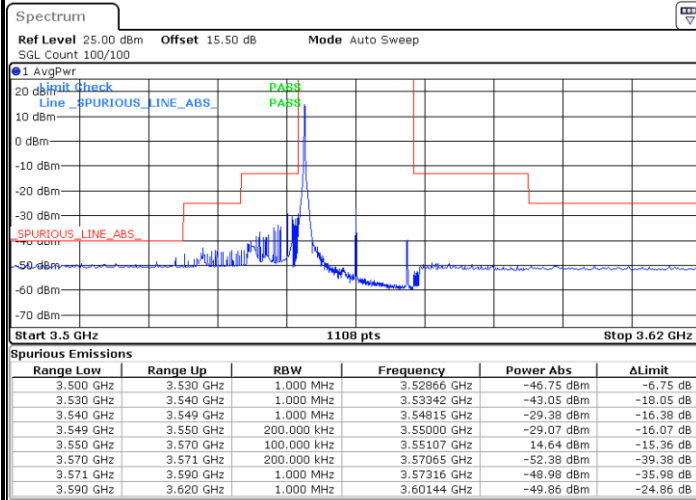
N/A



LTE Band 48 / 20MHz

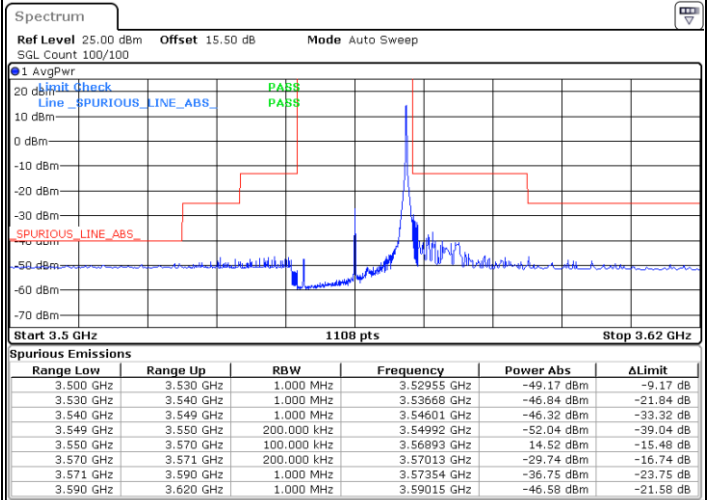
256QAM

Lowest Channel / 1RB0



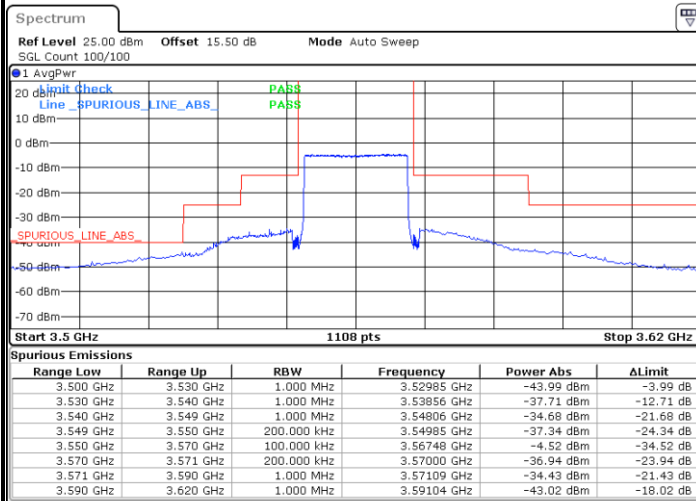
Date: 5.AUG.2022 22:24:09

Lowest Channel / 1RBmax



Date: 5.AUG.2022 22:27:20

Lowest Channel / FullIRB



Date: 5.AUG.2022 22:20:57

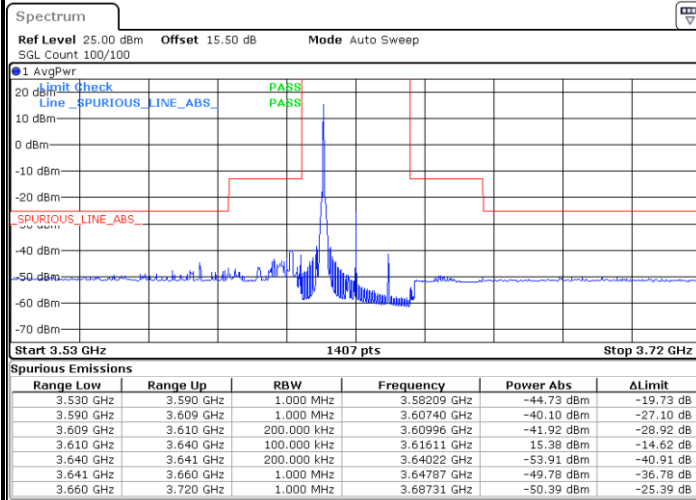
N/A



LTE Band 48 / 20MHz

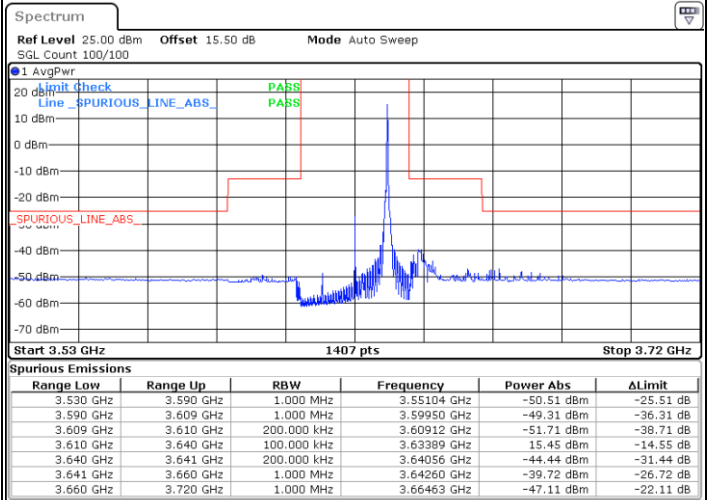
256QAM

Middle Channel / 1RB0



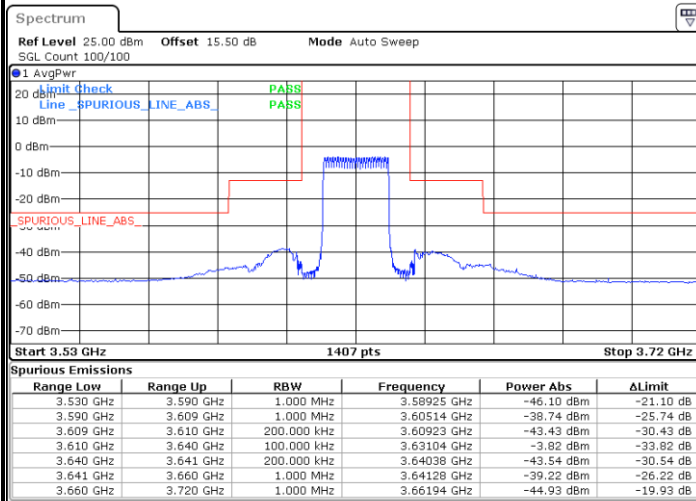
Date: 5.AUG.2022 22:25:11

Middle Channel / 1RBmax



Date: 5.AUG.2022 22:28:23

Middle Channel / FullRB



Date: 5.AUG.2022 22:22:00

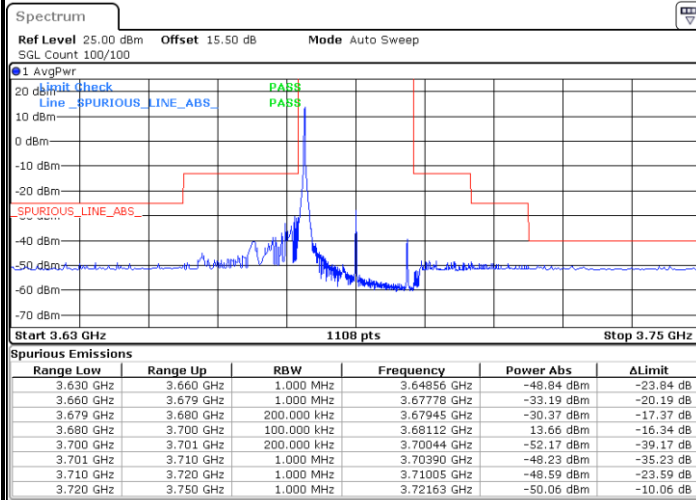
N/A



LTE Band 48 / 20MHz

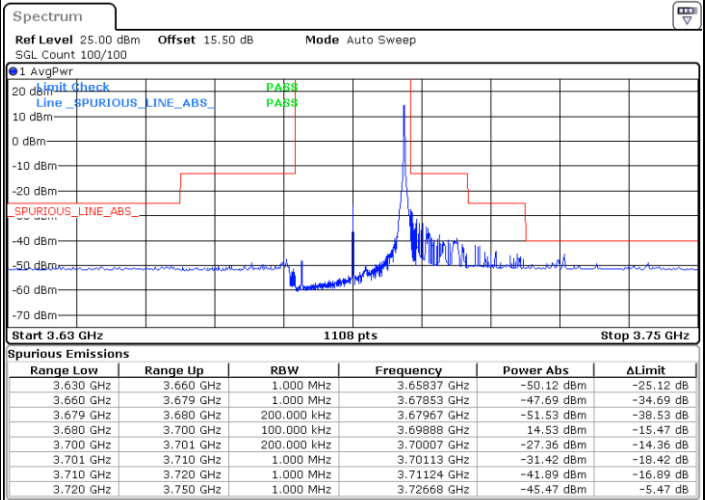
256QAM

Highest Channel / 1RB0



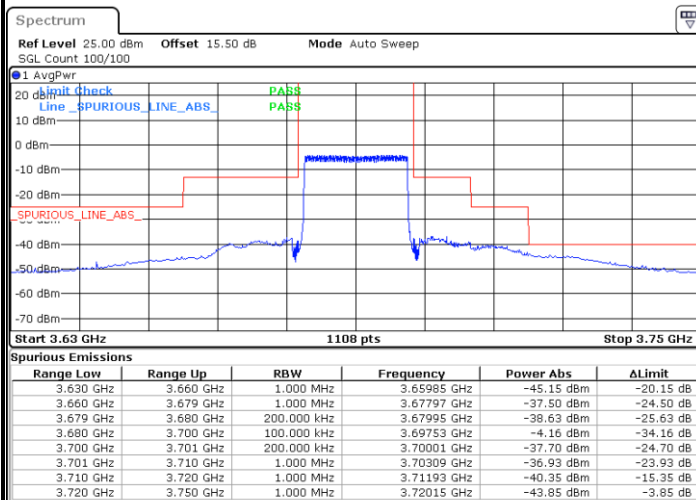
Date: 5.AUG.2022 22:26:14

Highest Channel / 1RBmax



Date: 5.AUG.2022 22:29:26

Highest Channel / FullIRB



Date: 5.AUG.2022 22:23:02

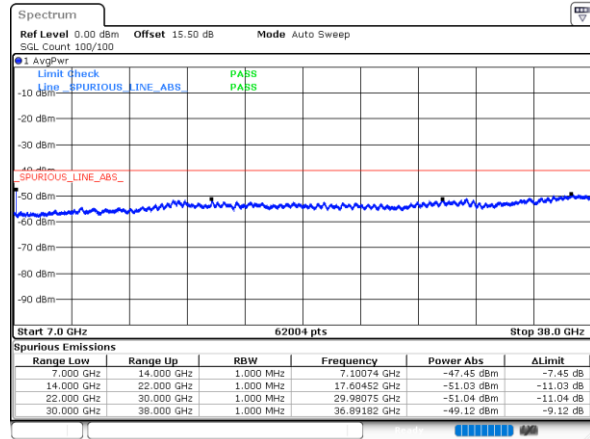
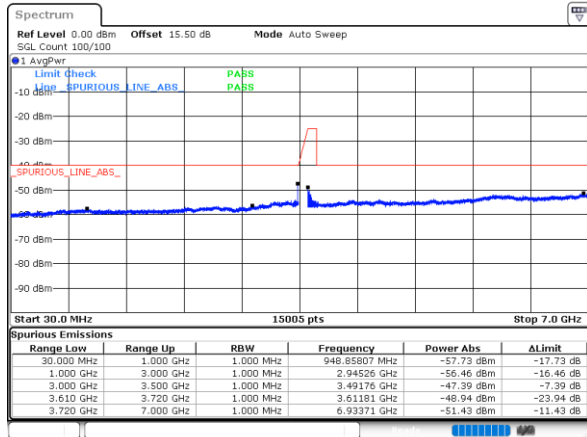
N/A



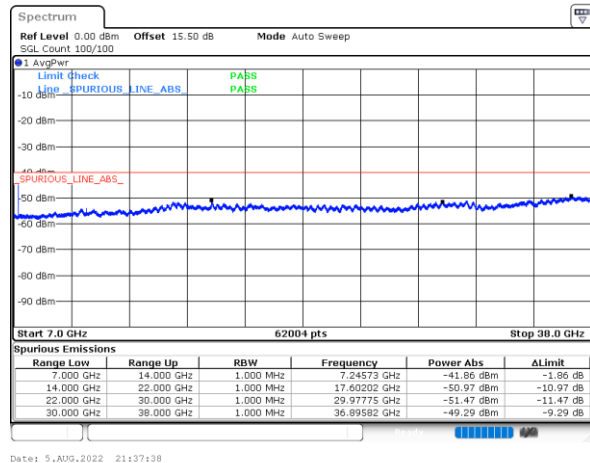
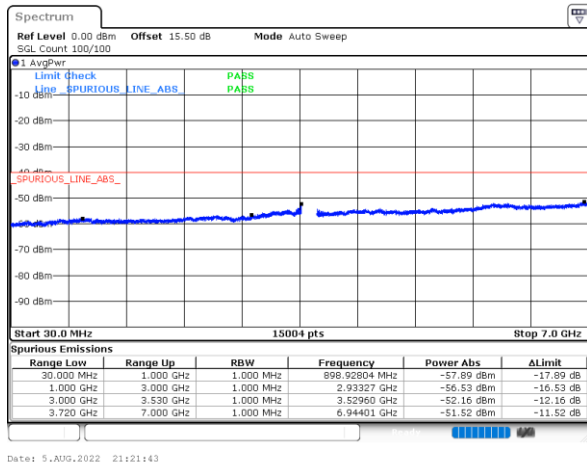
Conducted Spurious Emission

LTE Band 48 / 5MHz

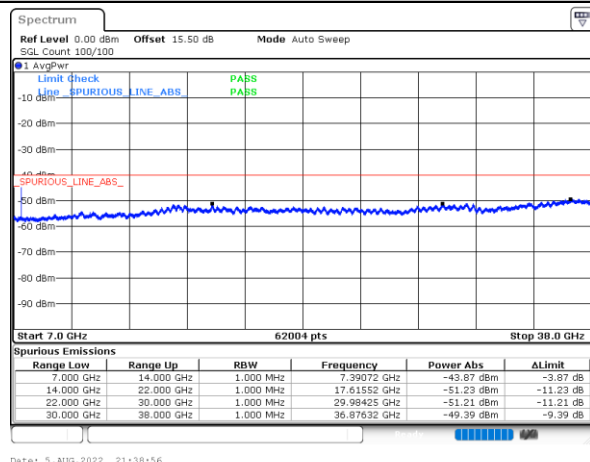
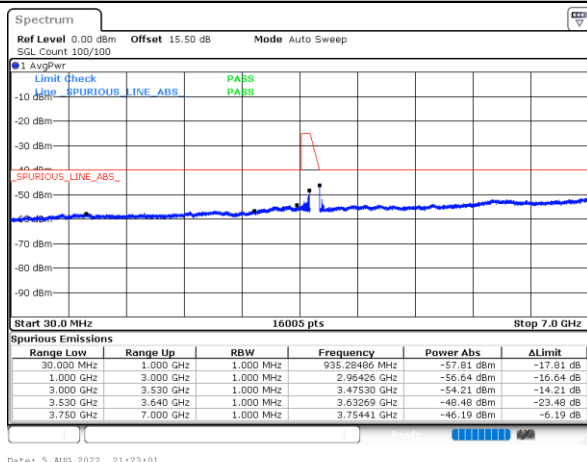
Lowest Channel / QPSK



Middle Channel / QPSK



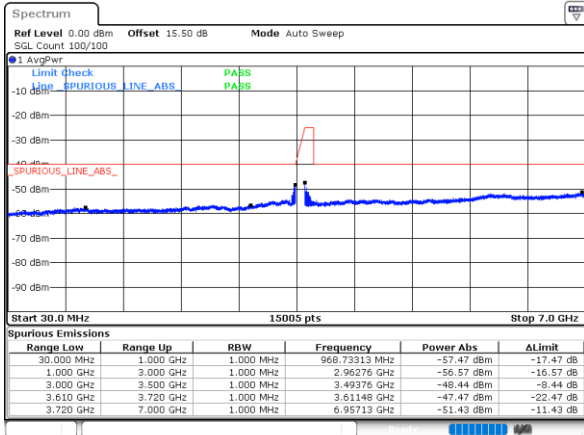
Highest Channel / QPSK



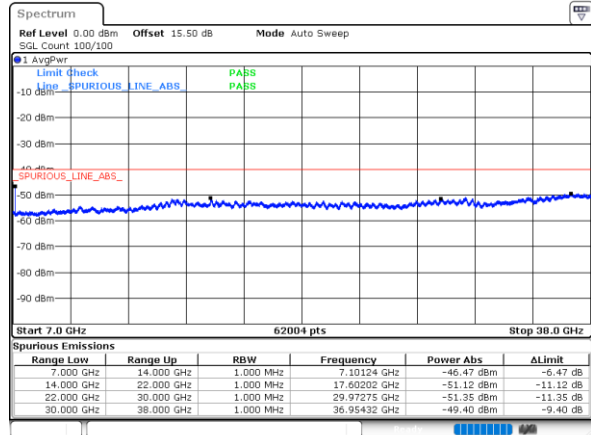


LTE Band 48 / 10MHz

Lowest Channel / QPSK

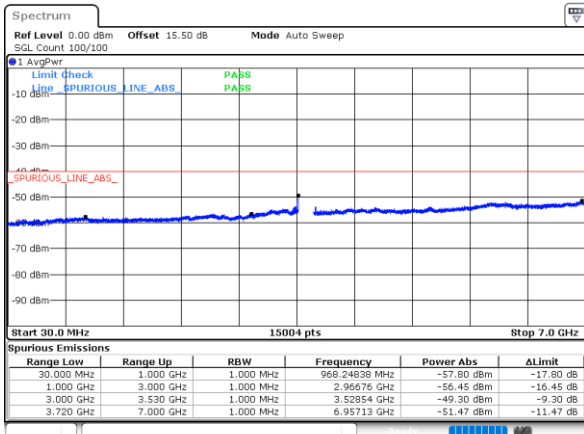


Date: 5.AUG.2022 21:24:24

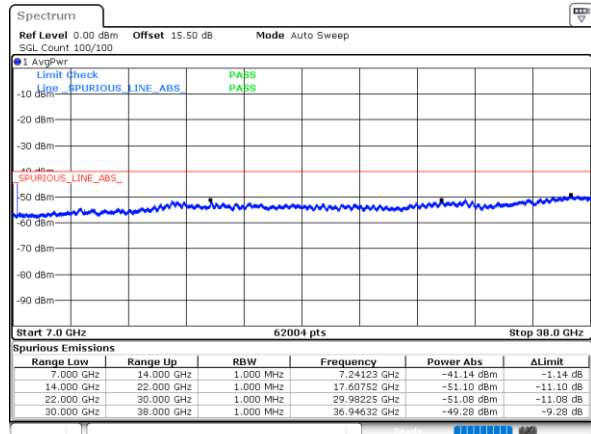


Date: 5.AUG.2022 21:40:21

Middle Channel / QPSK

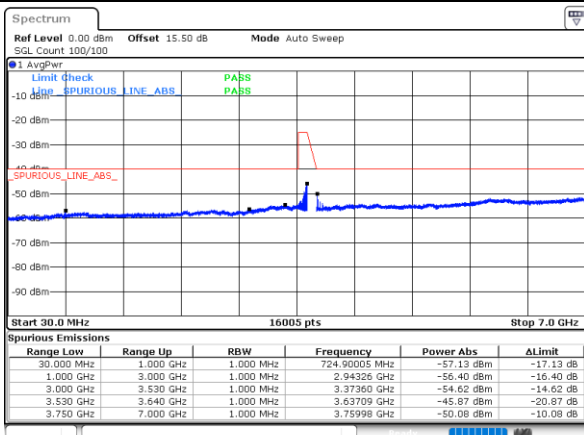


Date: 5.AUG.2022 21:25:42

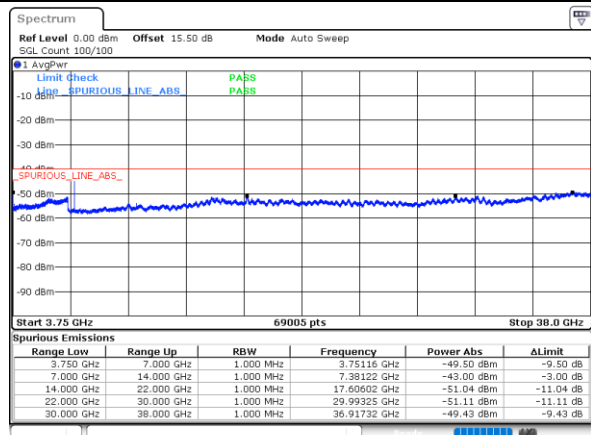


Date: 5.AUG.2022 21:41:39

Highest Channel / QPSK



Date: 5.AUG.2022 21:27:00

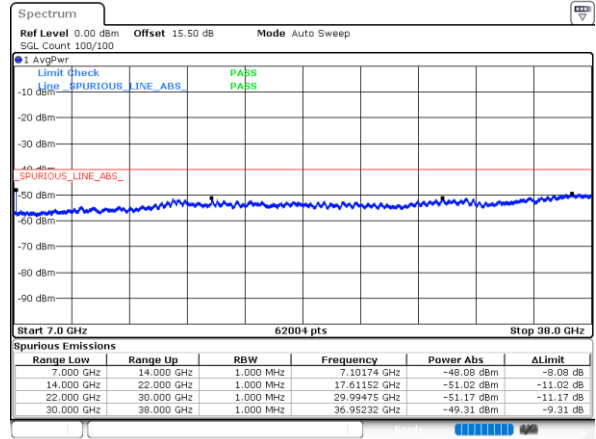
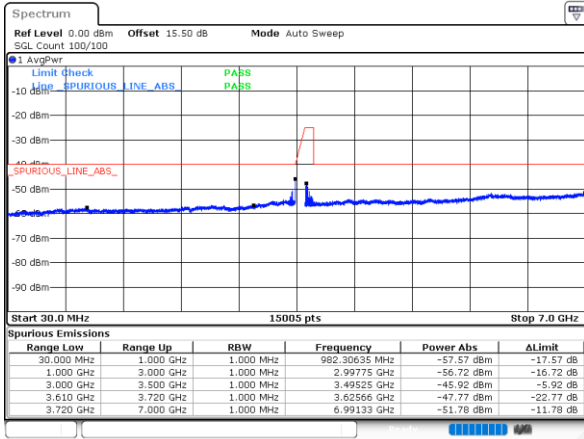


Date: 5.AUG.2022 21:42:59

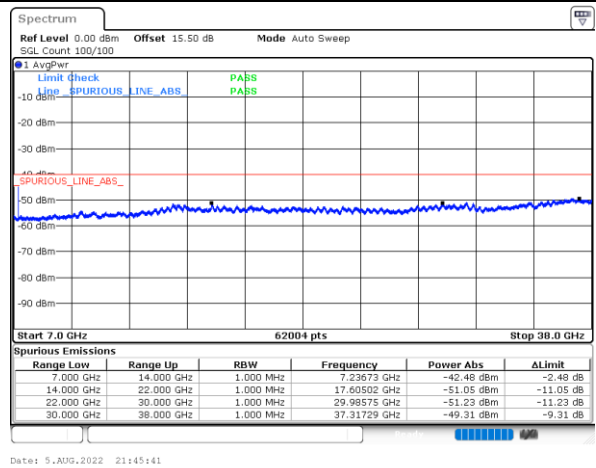
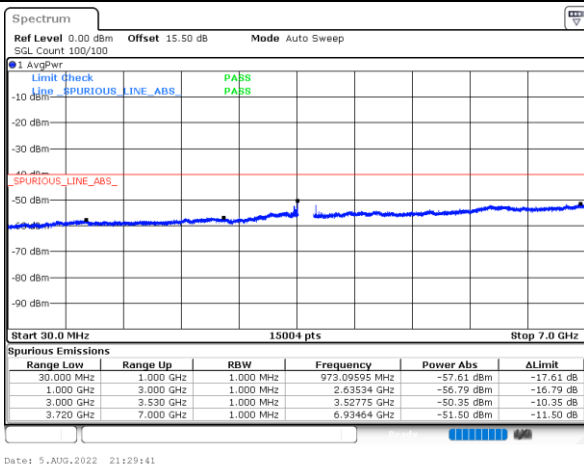


LTE Band 48 / 15MHz

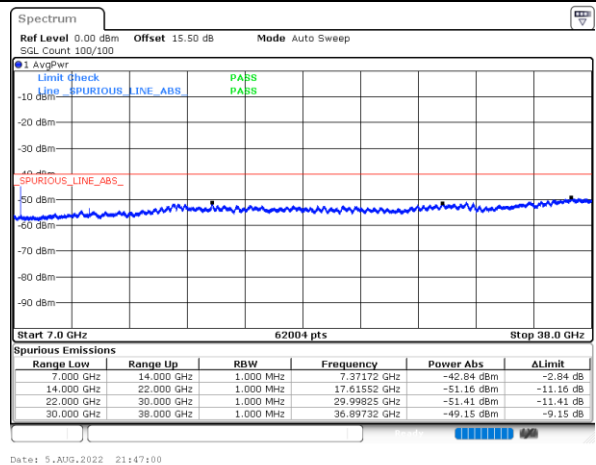
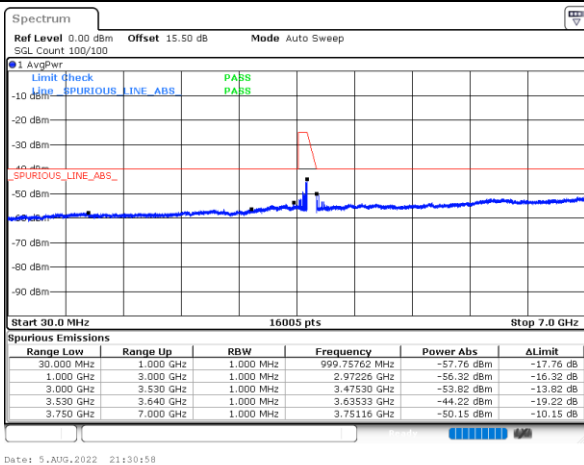
Lowest Channel / QPSK



Middle Channel / QPSK



Highest Channel / QPSK





Spectrum

Ref Level 0.00 dBm
SGL Count 100/100

Offset 15.50 dB Mode Auto Sweep

1 AvgPwr

Limit check
SPURIOUS_LINE_ABS

PASS
PASS

SPURIOUS_LINE_ABS

Start 30.0 MHz 1500S pts Stop 7.0 GHz

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ALimit
30.000 MHz	1.000 GHz	1.000 MHz	998.30335 MHz	-57.76 dBm	-17.76 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.96576 GHz	-56.57 dBm	-16.57 dB
3.000 GHz	3.500 GHz	1.000 MHz	3.49476 GHz	-45.00 dBm	-5.00 dB
3.610 GHz	3.720 GHz	1.000 MHz	3.61412 GHz	-45.89 dBm	-20.89 dB
3.720 GHz	7.000 GHz	1.000 MHz	6.94073 GHz	-51.40 dBm	-11.40 dB

Spectrum

Ref Level 0.00 dBm
SGL Count 100/100

Offset 15.50 dB Mode Auto Sweep

●1 AvgPwr

Limit check
line SPURIOUS_LINE_ABS PASS
PASS

Start 7.0 GHz 62004 pts Stop 38.0 GHz

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
7.000 GHz	14.000 GHz	1.000 MHz	7.10224 GHz	-46.31 dBm	-6.31 dB
14.000 GHz	22.000 GHz	1.000 MHz	17.60302 GHz	-51.07 dBm	-11.07 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.99575 GHz	-51.12 dBm	-11.12 dB
30.000 GHz	38.000 GHz	1.000 MHz	37.26230 GHz	-49.21 dBm	-9.21 dB

Spectrum

Ref Level 0.00 dBm **Offset** 15.50 dB **Mode** Auto Sweep

SGL Count 100/100

1 AvgPwr

Limit **check** **LINE** **ABS** **PAS** **PAS**

SPURIOUS_LINE_ABS

Start 30.0 MHz **15004 pts** **Stop** 7.0 GHz

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
30.000 MHz	1.000 GHz	1.000 MHz	999.27286 MHz	-57.65 dBm	-17.65 dB
1.000 GHz	3.000 GHz	1.000 MHz	2.99976 GHz	-56.67 dBm	-16.67 dB
3.000 GHz	3.530 GHz	1.000 MHz	3.52536 GHz	-48.57 dBm	-8.57 dB
3.720 GHz	7.000 GHz	1.000 MHz	6.93464 GHz	-51.61 dBm	-11.61 dB

Spectrum
Ref Level 0.00 dBm **Offset** 15.50 dB **Mode** Auto Sweep
SQL Count 100/100

#1 AvgPwr

Limit	Check	Line	SPURIOUS	LINE_ABS	PASS	PASS
-10 dBm						
-20 dBm						
-30 dBm						
-40 dBm						
-50 dBm						
-60 dBm						
-70 dBm						
-80 dBm						
-90 dBm						

Start 7.0 GHz **62004 pts** **Stop 38.0 GHz**

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
14.000 GHz	14.000 GHz	1.000 MHz	7.23223 GHz	-42.47 dBm	-2.47 dB
14.000 GHz	22.000 GHz	1.000 MHz	17.60502 GHz	-51.10 dBm	-11.10 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.99575 GHz	-51.50 dBm	-11.50 dB
30.000 GHz	38.000 GHz	1.000 MHz	36.94482 GHz	-49.24 dBm	-9.24 dB

Spectrum

Ref Level 0.00 dBm Offset 15.50 dB Mode Auto Sweep
 SGL Count 100/100

1 AvgWvr

Limit (check) PABS PABS

SPURIOUS_LINE_ABS PABS

SPURIOUS_LINE_ABS

Start 30.0 MHz 16005 pts Stop 7.0 GHz

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ALimit
30.000 MHz	1.000 GHz	1.000 MHz	949.34283 MHz	-57.74 dBm	-17.74 dBm
3.000 GHz	3.000 GHz	1.000 MHz	2.95026 GHz	-56.62 dBm	-16.62 dBm
3.000 GHz	3.530 GHz	1.000 MHz	3.52033 GHz	-54.10 dBm	-14.10 dBm
3.530 GHz	3.640 GHz	1.000 MHz	3.63621 GHz	-41.66 dBm	-16.66 dBm
3.750 GHz	7.000 GHz	1.000 MHz	6.91992 GHz	-51.62 dBm	-11.62 dBm

Spectrum

Ref Level 0.00 dBm Offset 15.50 dB Mode Auto Sweep
 SGL Count 100/100

1 AvgBW

Unit Check Line SPURIOUS LINE_ABS PAss PAss

Start 7.0 GHz 62004 pts Stop 38.0 GHz

Spurious Emissions

Range Low	Range Up	RBW	Frequency	Power Abs	ΔLimit
14.000 GHz	14.000 GHz	1.000 MHz	7.36222 GHz	-43.09 dBm	-3.09 dB
14.000 GHz	22.000 GHz	1.000 MHz	17.60402 GHz	-51.06 dBm	-11.06 dB
22.000 GHz	30.000 GHz	1.000 MHz	29.97475 GHz	-51.18 dBm	-11.18 dB
30.000 GHz	38.000 GHz	1.000 MHz	36.94032 GHz	-49.23 dBm	-9.23 dB

: A2-110 of 111

Frequency Stability

Test Conditions		LTE Band 48 (QPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 10MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0003	PASS
40	Normal Voltage	0.0027	
30	Normal Voltage	0.0021	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0030	
0	Normal Voltage	0.0012	
-10	Normal Voltage	0.0012	
-20	Normal Voltage	0.0000	
-30	Normal Voltage	0.0012	
20	Maximum Voltage	0.0025	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0009	

Note:

1. Normal Voltage = 3.30 V. ; Battery End Point (BEP) = 3.135 V. ; Maximum Voltage = 3.63 V.
2. The frequency fundamental emissions stay within the authorized frequency block.

LTE Band 48C

26dB Bandwidth

Mode	LTE Band 48C : 26dB BW(MHz)			
QPSK				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	24.98	29.91	34.62	24.98
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	30.03	34.90	39.88	-

Mode	LTE Band 48C : 26dB BW(MHz)			
16QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	24.73	29.79	35.11	24.73
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	30.15	34.76	39.80	-

Mode	LTE Band 48C : 26dB BW(MHz)			
64QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	24.78	29.85	34.97	24.78
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	30.03	34.76	39.72	-

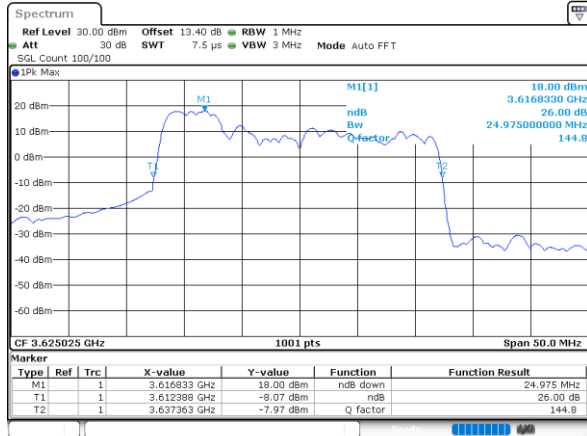
Mode	LTE Band 48C : 26dB BW(MHz)			
256QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	24.78	29.79	34.76	24.98
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	29.91	34.90	39.72	-



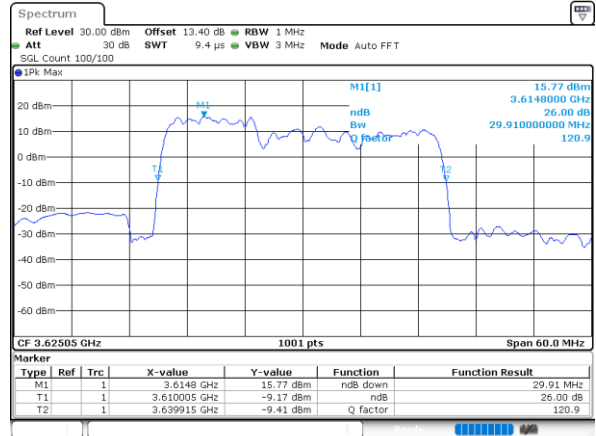
LTE Band 48C

QPSK

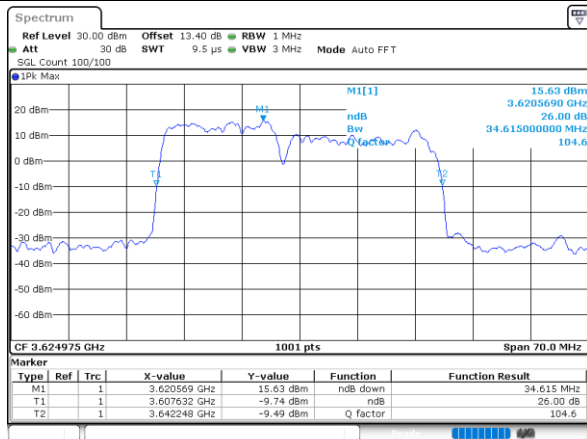
Middle Channel / 5MHz+20MHz



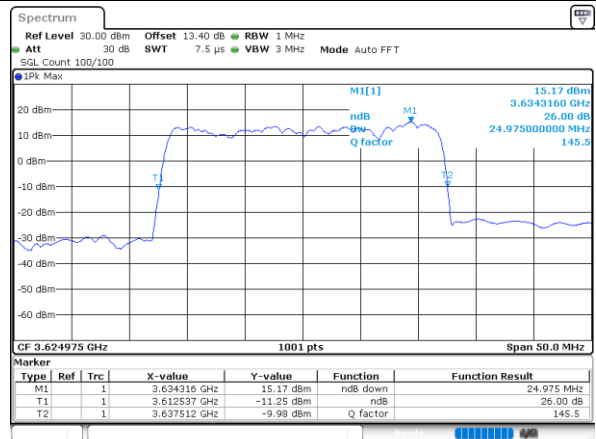
Middle Channel / 10MHz+20MHz



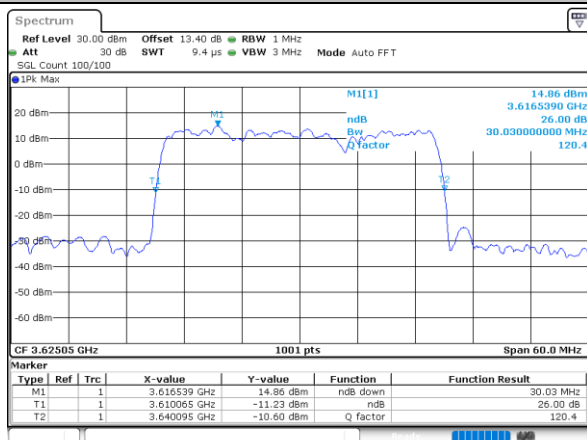
Middle Channel / 15MHz+20MHz



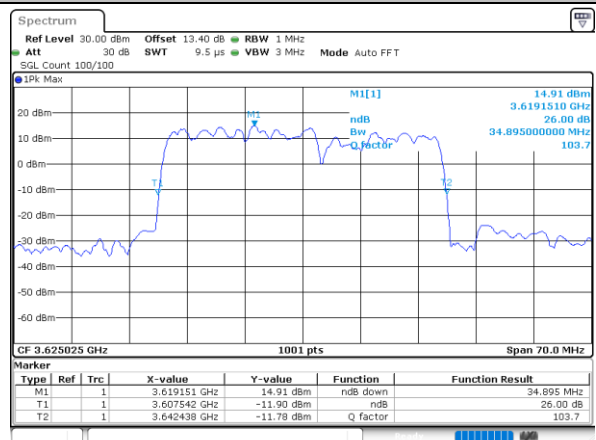
Middle Channel / 20MHz+5MHz



Middle Channel / 20MHz+10MHz



Middle Channel / 20MHz+15MHz



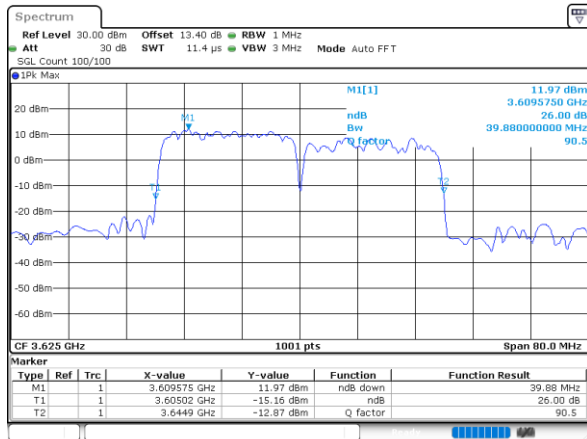


LTE Band 48C

QPSK

Middle Channel / 20MHz+20MHz

N/A

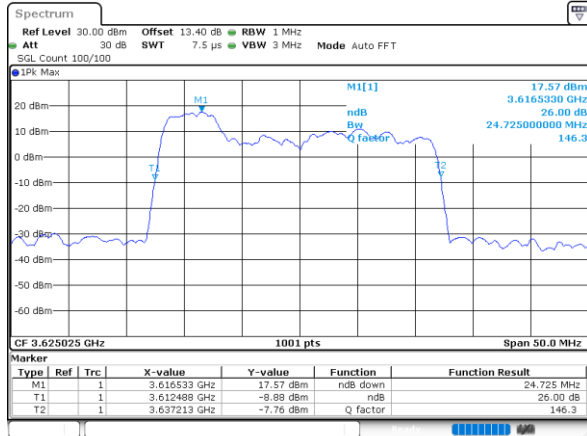




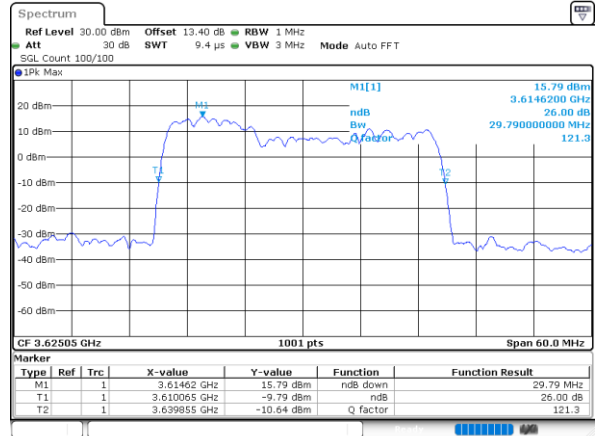
LTE Band 48C

16QAM

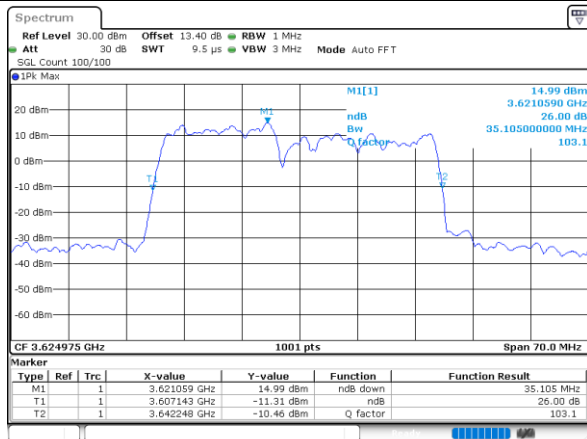
Middle Channel / 5MHz+20MHz



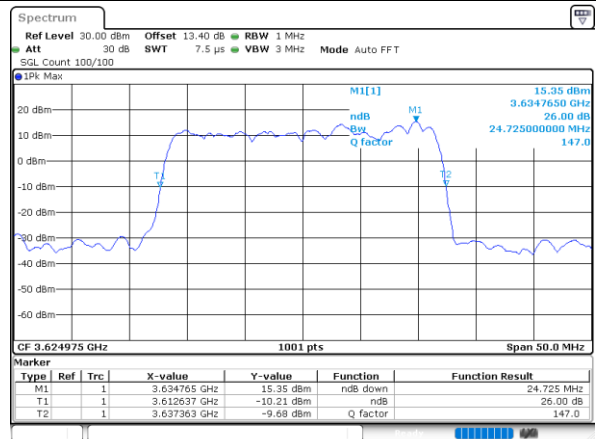
Middle Channel / 10MHz+20MHz



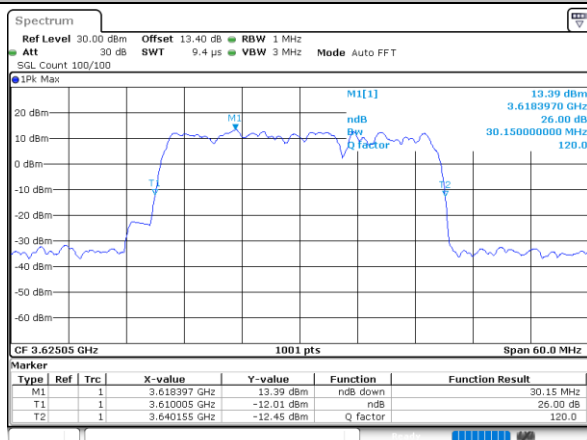
Middle Channel / 15MHz+20MHz



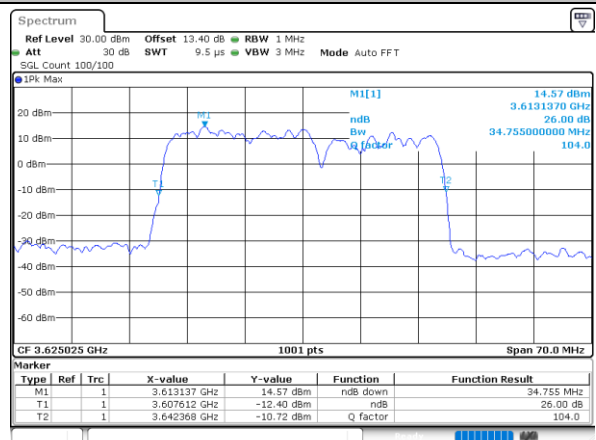
Middle Channel / 20MHz+5MHz



Middle Channel / 20MHz+10MHz



Middle Channel / 20MHz+15MHz



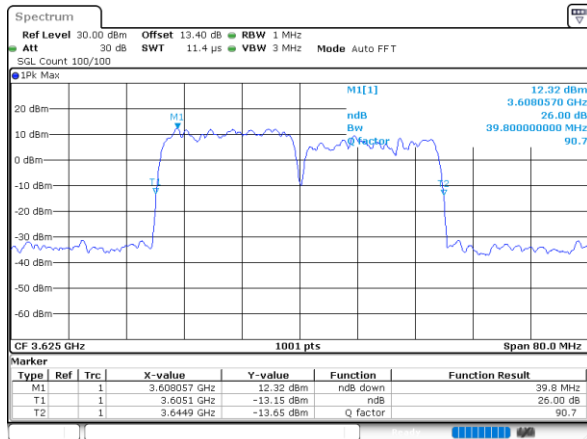


LTE Band 48C

16QAM

Middle Channel / 20MHz+20MHz

N/A

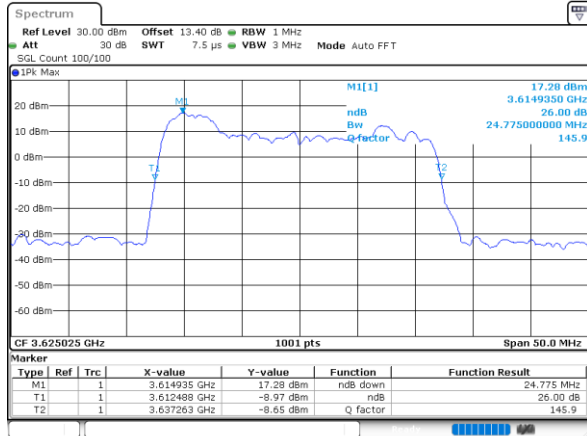




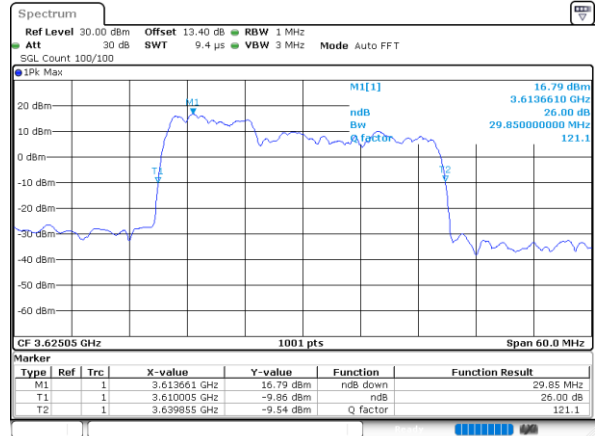
LTE Band 48C

64QAM

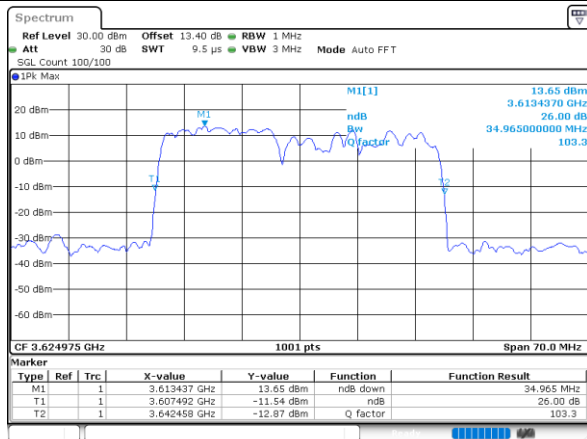
Middle Channel / 5MHz+20MHz



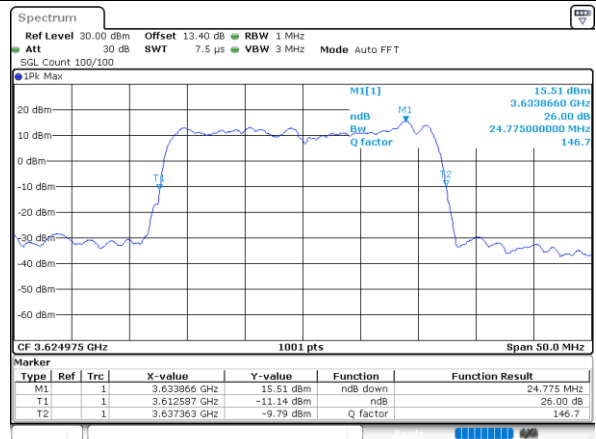
Middle Channel / 10MHz+20MHz



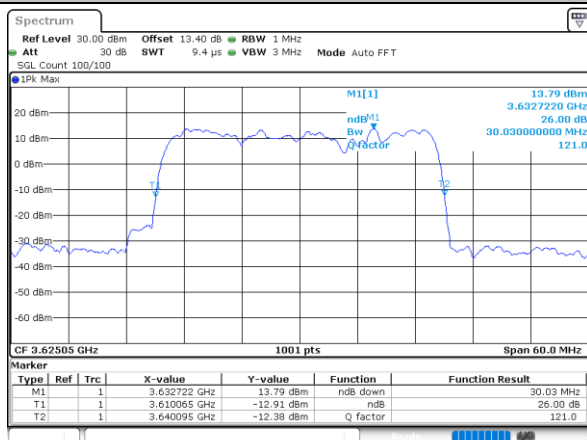
Middle Channel / 15MHz+20MHz



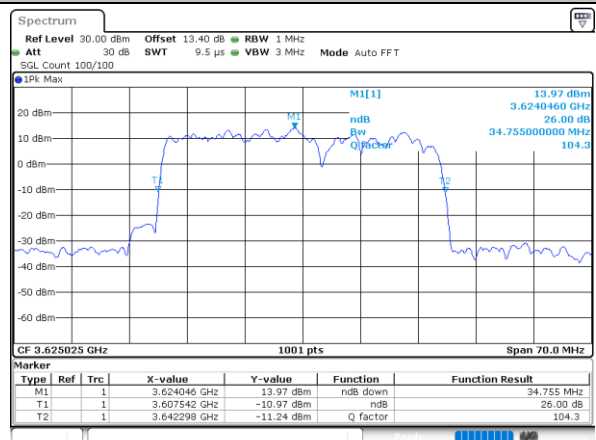
Middle Channel / 20MHz+5MHz



Middle Channel / 20MHz+10MHz



Middle Channel / 20MHz+15MHz



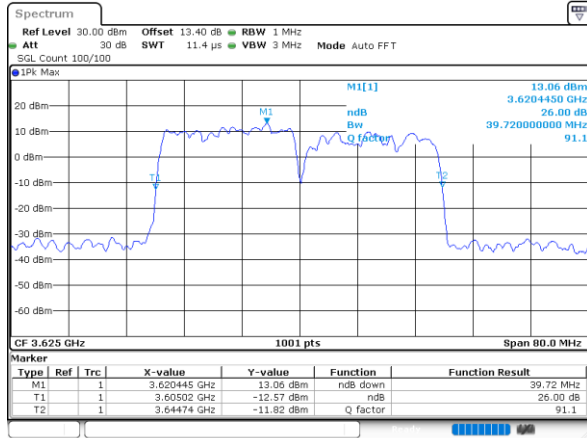


LTE Band 48C

64QAM

Middle Channel / 20MHz+20MHz

N/A

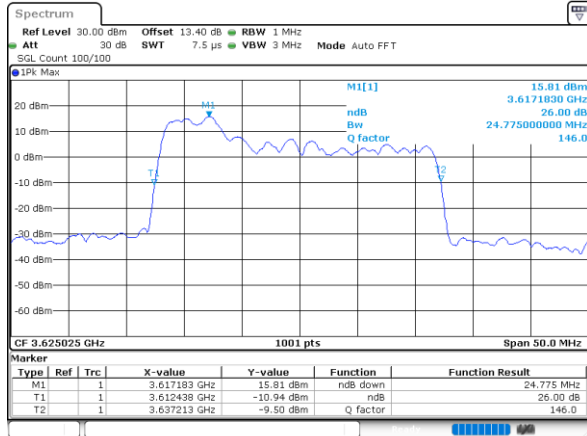




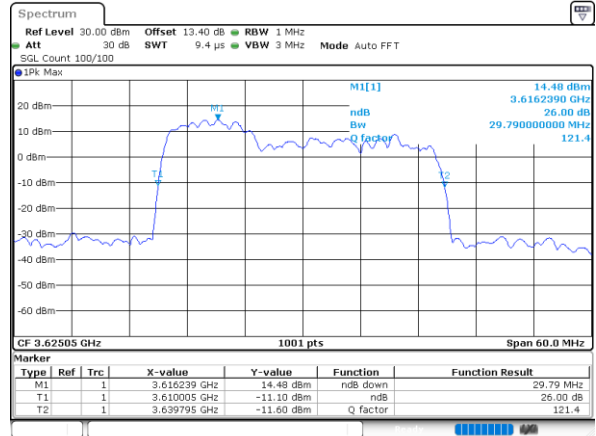
LTE Band 48C

256QAM

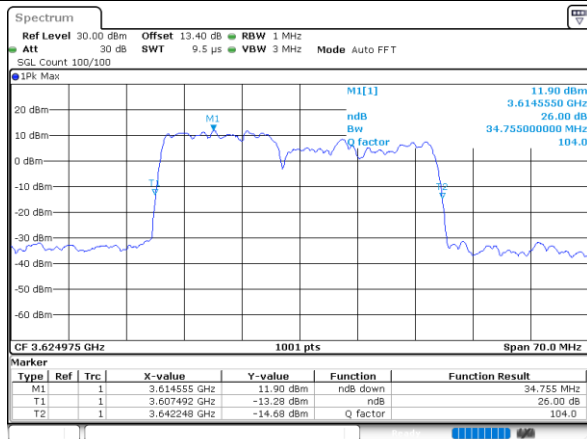
Middle Channel / 5MHz+20MHz



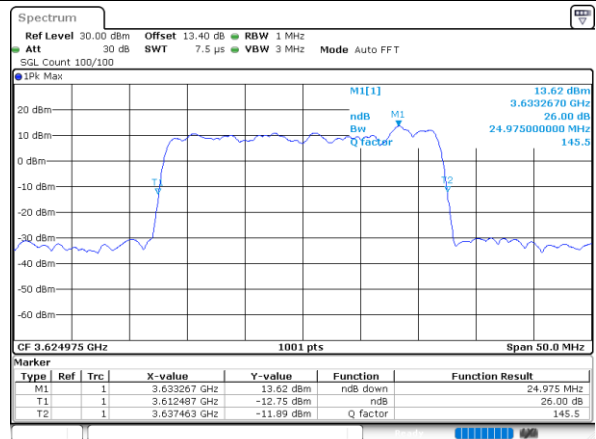
Middle Channel / 10MHz+20MHz



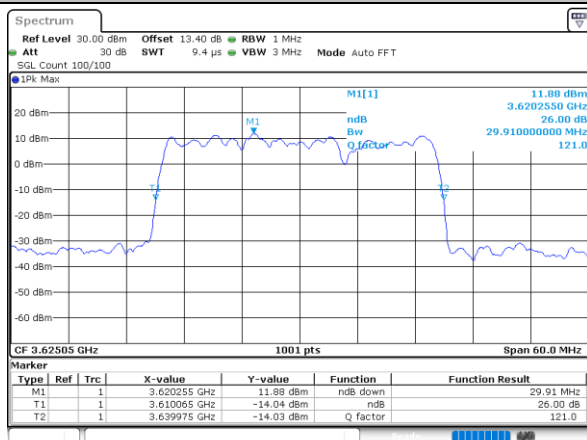
Middle Channel / 15MHz+20MHz



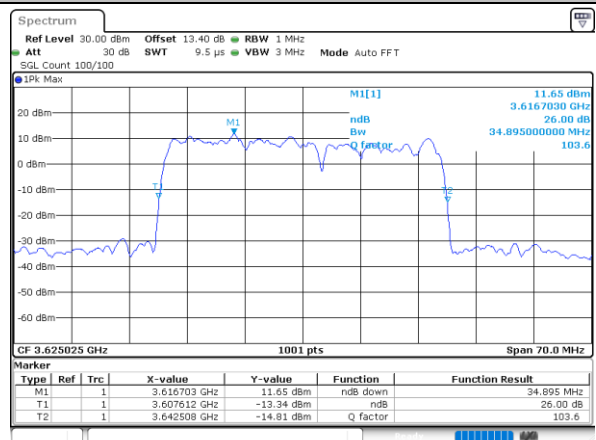
Middle Channel / 20MHz+5MHz



Middle Channel / 20MHz+10MHz



Middle Channel / 20MHz+15MHz



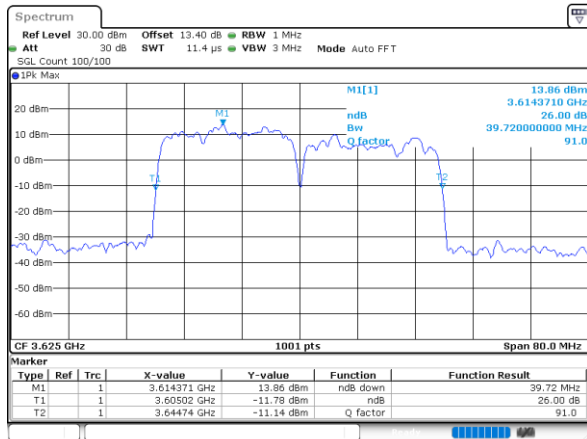


LTE Band 48C

256QAM

Middle Channel / 20MHz+20MHz

N/A



Occupied Bandwidth

Mode	LTE Band 48C : 99%OBW(MHz)			
QPSK				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	23.28	28.05	32.94	23.08
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	27.81	32.87	37.56	-

Mode	LTE Band 48C : 99%OBW(MHz)			
16QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	23.53	27.93	32.80	23.33
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	28.29	32.80	37.56	-

Mode	LTE Band 48C : 99%OBW(MHz)			
64QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	22.98	27.75	32.94	23.33
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	27.87	32.59	37.64	-

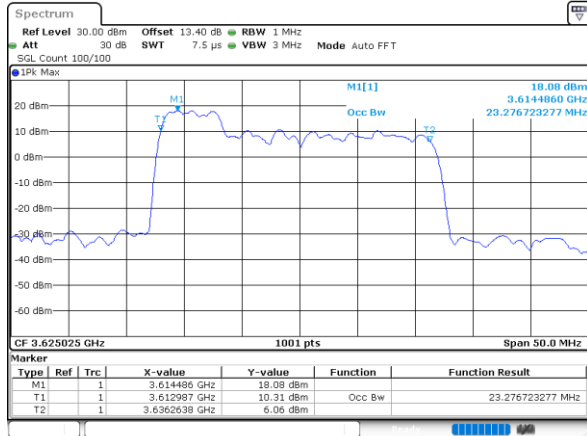
Mode	LTE Band 48C : 99%OBW(MHz)			
256QAM				
BW	5MHz+20MHz	10MHz+20MHz	15MHz+20MHz	20MHz+5MHz
Middle CH	23.23	28.23	33.01	23.23
BW	20MHz+10MHz	20MHz+15MHz	20MHz+20MHz	N/A
Middle CH	28.05	32.94	37.24	-



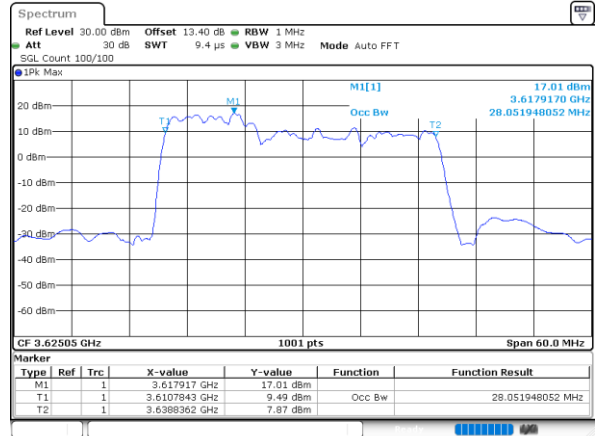
LTE Band 48C

QPSK

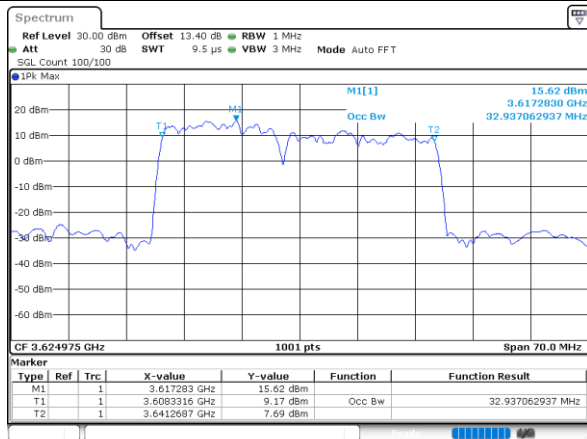
Middle Channel / 5MHz+20MHz



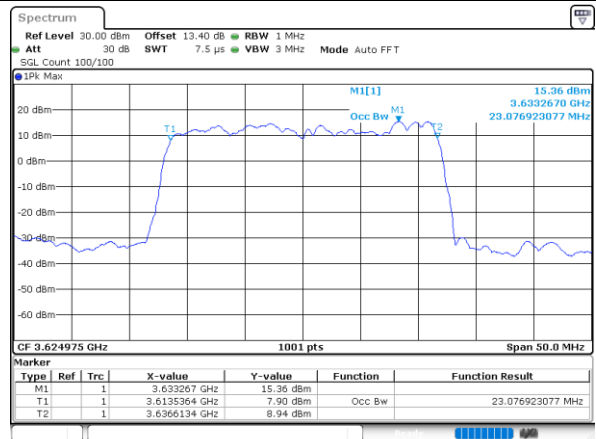
Middle Channel / 10MHz+20MHz



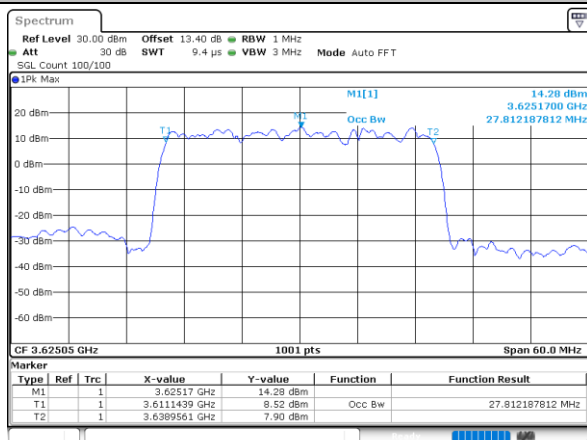
Middle Channel / 15MHz+20MHz



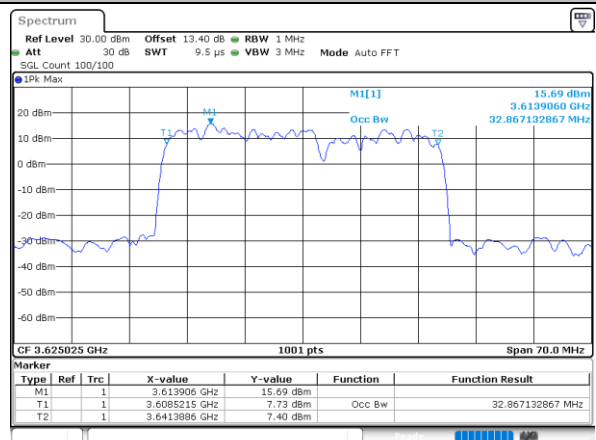
Middle Channel / 20MHz+5MHz



Middle Channel / 20MHz+10MHz



Middle Channel / 20MHz+15MHz





LTE Band 48C

QPSK

Middle Channel / 20MHz+20MHz

N/A

